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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,889	03/16/2001	Peter Zhu	JOHNA.060A	7456

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

CROSS, LATOYA I

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 03/31/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,889

Applicant(s)

ZHU ET AL

Examiner

LaToya I. Cross

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 14-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13, drawn to a method for determining aldehydes, classified in class 436, subclass 128.
 - II. Claims 14-23, drawn to a liquid measuring device, classified in class 73, subclass 149.
 - III. Claims 24-33, drawn to a test strip, classified in class 422, subclass 56.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II and inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the device can be used to practice a materially different method such as in measuring liquids other than aldehyde containing samples. The test strip comprising MBTH can be used in a materially different method, such as in detecting ozone. See US Patent 4,859,607.
3. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are directed to a test strip and a measuring device. The two are not disclosed as being used together and they have different modes of operation.

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4. Because these inventions are distinct for the reasons given above and the search required for Groups II and III are not required for Group I, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Che Chereskin on March 20, 2003 a provisional election was made without traverse to prosecute the invention of group I, claims 1-13.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-33 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 7, 8, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 3,645,696 to Iannacone et al.

Iannacone et al teach a method for colorimetrically determining the presence of aldehydes. The method comprises reacting an aldehyde-containing sample with 3-methyl-2-benzothiazolone hydrazone (MBTH) to form an azine. MBTH is oxidized. The oxidized

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MBTH is reacted with the azine to form a visually observable color (See reaction scheme at col. 4). Iannacone et al teach that the final reaction product is a blue color, as recited in claim 2. Sodium periodate (periodic acid salt) is used as an oxidizing agent, as recited in claim 3 (col. 4, lines 11-12). The reaction scheme at col. 4 shows the oxidizing agent being added to MBTH separately from the reaction of MBTH with the aldehyde-containing sample, as recited in claim 7. With respect to claims 8 and 10, Iannacone et al teach that a fixed sample (5-10 milliliters) of test sample is added to a one once vial containing the oxidizing agent (col. 4, lines 69-75). In example 3, Iannacone et al teach that the MBTH is absorbed onto a silica gel absorbent material, as recited in claims 11 and 13.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be anticipated, within the meaning of 35 USC 102(b) in view of Iannacone et al.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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11. Claims 4-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iannacone et al in view of Marine Chemistry article entitled "A colorimetric procedure for the determination of aldehydes in seawater and in cultures of methylotrophic bacteria" authored by Eberhardt et al (hereinafter Eberhardt et al).

The disclosure of Iannacone et al is described above. Iannacone et al fail to teach 1) glutaraldehyde as the particular aldehyde to be detected and 2) ferric chloride as the oxidizing agent.

Eberhardt et al teach a similar process for determining the presence of aldehydes whereby MBTH is reacted with a test sampled and oxidized, followed by reaction of the oxidized MBTH with the azine product to produce a visible color. Regarding detecting glutaraldehyde specifically, Eberhardt teaches that MBTH is not specific for any one aldehyde, but reacts with other aldehydes as well, including glutaraldehyde (full paragraph, page 205). Regarding the use of ferric chloride as an oxidizing agent, Eberhardt et al teach that in using ferric chloride oxidizing agent, a strong color formation results, which would provide clear visual results for a user.

It would have been obvious to one of ordinary skill in the art to use ferric chloride as an oxidizing agent in misreading of results created by weak color formation. Also, the ordinarily-skilled artisan would have recognized that in using MBTH to determine aldehydes, any aldehyde, including glutaraldehyde, could have been determined.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 USC 103, in view of the teachings of Iannacone et al in view of Eberhardt et al.

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12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iannacone et al in view of US Patent 4,703,763 to McAlister et al.

The disclosure of Iannacone et al is described above. Iannacone et al fail to teach loading a fixed volume of test sample into a measuring device having a liquid impermeable membrane.

McAlister et al teach a device for sample a pre-set volume of test sample. The device is a syringe-type measuring device having a plug element (filter) arranged to be air-permeable, but liquid impermeable. This allows enough fluid sample to be up taken into the syringe and then allow the fluid flow to stop when the predetermined amount is taken in. See col. 1, lines 41-59. It would have been obvious to one of ordinary skill in the art to use the device of McAlister et al to measuring an exact amount of test sample in carrying out the method of Iannacone et al. Such will prevent using excess sample. Since it is important that the amount of reagents in the method of Iannacone et al be exact for the amount of sample, using the device of McAlister et al will alleviate false positives due to incorrect reagent to sample ratios.

Therefore, for the reason set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 USC 103, in view of the teachings of Iannacone et al and McAlister et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 703-305-7360. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 703-308-4037. The fax phone numbers for the


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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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March 24, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1700